National Load Despatch Centre
Total Transfer Capability for September 2015

Issue Date: 02/09/2015 Issue Time: 1150 hrs Revision No. 6

Corridor	Date	Time Period (hrs)	Total Transfer Capability (TTC)	Reliability Margin	Available Transfer Capability (ATC)	Long Term Access (LTA)/ Medium Term Open Access (MTOA) #	Margin Available for Short Term Open Access (STOA)	Changes in TTC w.r.t. Last Revision	Comments
NR-WR *	1st Sep 2015 to 30th Sep 2015	00-24	2500	500	2000	421	1579		
WR-NR*	1st Sep 2015 to 30th Sep 2015	00-24	6400	500	5900	5638	262		
NR-ER*	1st Sep 2015 to 30th Sep 2015	00-06	2000	200	1800	293	1507		
		06-18'	2000		1800	358	1442		
		18-24	2000		1800	293	1507		
ER-NR*	1st Sep 2015 to 30th Sep 2015	00-24	4800	300	4500	2431	2069		
W3-ER$	1st Sep 2015 to 30th Sep 2015	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.						
ER-W3	1st Sep 2015 to 30th Sep 2015	00-24	1000	300	700	874	0		
WR-SR	1st Sep 2015 to 30th Sep 2015	00-24	2300	750	1550	1550	0		
SR-WR *	1st Sep 2015 to 30th Sep 2015	00-24	No limit is being Specified.						
ER-SR	1st Sep 2015 to 30th Sep 2015	00-06 18-24	2650	0	2650	2300	350		
		06-18'				2365	285		
SR-ER *	1st Sep 2015 to 30th Sep 2015	00-24	No limit is being Specified.						
S1-S2	1st Sep 2015 to 30th Sep 2015	00-24	S1-S2 corridor TTC/ATC is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.						
ER-NER	1st Sep 2015 to 30th Sep 2015	00-17 23-24	1200	40	1160	210	950		
		17-23	1250		1210		1000		
NER-ER	1st Sep 2015 to 30th Sep 2015	00-17 23-24	1220	30	1190	0	1190		
		17-23	1300	40	1260		1260		
W3 zone Injection	1st Sep 2015 to 30th Sep 2015	00-17 23-24	9400	200	9200	7576	1624		
		17-23	9900		9700		2124		

* Fifty Percent (50 %) Counter flow benefit on account of LTA/MTOA transactions in the reverse direction would be considered for advanced transactions (Bilateral & First Come First Serve).

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$ As per Simulations, predominant direction of flow is on West to North Corridor. Hence, in case injection point is in Western Region (W1,W2,W3), STOA/PX transactions from West to North on West-East-North corridor shall not be allowed as such transaction increases congestion in the West to North Corridor.

1) S1 comprises of Telangana, AP and Karnataka: S2 comprises of Tamil Nadu, Kerala and Puducherry
2) W3 comprises of the following regional entities :
a) Chattisgarh Sell transaction, b) Jindal Power Limited (JPL) Stage-I & Stage-II, c) Jindal Steel and Power Limited (JSPL), d) ACBL, e) LANCO Amarkantak
f) BALCO, g) Sterlite (#1,3,4), h) NSPCL, i) Korba, j) Sipat, k) KSK Mahanadi, L)DB Power, m) KWPCL, n)Vandana Vidyut

The figure is based on LTA/MTOA approved by CTU and Allocation figures as per RPCs RTA/REA. In actual Operation, due to Units being on Maintenance/ Fuel shortage/New units being commissionned the LTA/MTOA utilized would vary. RLDC/NLDC would factor this situation on day-ahead basis.
In the eventuality that net schedules exceed ATC, real time curtailments might be effected by RLDCs/NLDC.

In case of TTC Revision due to any shutdown :
1) The TTC value will be revised to normal values after restoration of shutdown.
2) The TTC value willl be revised to normal values if the shutdown is not being availed in real time.

Limiting Constraints

Corridor	Constraint
NR-WR	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak.
WR-NR	High Loading of 400kV Singrauli-Anpara & High loading of 765 kV Agra-Gwalior (1400 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and Loop flows on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda (power flowing from WR to NR on 765kV Gwalior-Agra D/C and from NR to WR on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda).
NR-ER	(n-1) contingency of 400 kV Saranath-Pusauli
ER-NR	N-1 contingency of 400 kV Biharshariff- Lakhisarai S/C
ER-W3	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG)
WR-SR & ER-SR	1. (n-1) of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG)
	3. ER-SR TTC has been declared assuming more than 1100 MW generation at Talcher Stage-2. In case Talcher Stage-2 generation goes below 1100 MW, then the ER-SR TTC would be revised downward as constraints within ER would emerge.
ER-NER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA ICT at Misa
NER-ER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA ICT at Misa
W3 zone Injection	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG)

*Primary constraints

Simultaneous Import Capability

Corridor	Date	Time Period (hrs)	Total Transfer Capability (TTC)	Reliability Margin	Available Transfer Capability (ATC)	Long Term Access (LTA)/ Medium Term Open Access (MTOA)	Margin Available for Short Term Open Access (STOA)	Changes in TTC w.r.t. Last Revision	Comments
ER									
NR*	1st Sep 2015 to 30th Sep 2015	00-05	9100	800	8300	8069	231		
		05-08'	9600		8800		731		
		08-19'	9100		8300		231		
		19-24'	8500		7700		0		
NER	1st Sep 2015 to 30th Sep 2015	00-17 23-24	1200	40	1160	210	950		
		17-23	1250		1210		1000		
WR									
SR	1st Sep 2015 to 30th Sep 2015	00-06 18-24	4950	750	4200	3850	350		
		06-18'	4950		4200	3915	285		

* Fifty Percent (50 %) Counter flow benefit on account of LTA/MTOA transactions in the reverse direction would be considered for advanced transactions (Bilateral & First Come First Serve).

* For approving STOA Bilateral transactions, margin available in Simultaneous Import of NR would be apportioned on WR-NR Corridor & ER-NR Corridor in the following ratio:
Margin in Simultaneous import of NR = A
WR-NR ATC =B
ER-NR ATC = C

Margin for WR-NR applicants = B * A/(B+C)
Margin for ER-NR Applicants = C * A/(B+C)

Example: Margin for WR-NR applicants from 00-05 hours = 231 * 5900/(5900+4500) = 131
Margin for ER-NR applicants from 00-05 hours = 231 * 4500/(5900+4500) = 100

Simultaneous Export Capability

Corridor	Date	Time Period (hrs)	Total Transfer Capability (TTC)	Reliability Margin	Available Transfer Capability (ATC)	Long Term Access (LTA)/ Medium Term Open Access (MTOA)	Margin Available for Short Term Open Access (STOA)	Changes in TTC w.r.t. Last Revision	Comments
NR*	1st Sep 2015 to 30th Sep 2015	00-06	4500	700	3800	714	3086		
		06-18'			3800	779	3021		
		18-24	4500		3800	714	3086		
NER	1st Sep 2015 to 30th Sep 2015	00-17 23-24	1220	30	1190	0	1190		
		17-23	1300	40	1260		1260		
WR									
SR *	1st Sep 2015 to 30th Sep 2015	00-24	No limit is being Specified.						

* Fifty Percent (50 %) Counter flow benefit on account of LTA/MTOA transactions in the reverse direction would be considered for advanced transactions (Bilateral & First Come First Serve).

Limiting Constraints

NR	**Import**	(n-1) contingency of 400 kV Biharshariff- Lakhisarai S/C
		High loading of 765 kV Agra-Gwalior (1400 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and high loop flows on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda (power flowing from WR to NR on 765kV Gwalior-Agra D/C and from NR to WR on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda).
	Export	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak.
		(n-1) contingency of 400 kV Saranath-Pusauli
NER	**Import**	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA ICT at Misa
	Export	
SR	**Import**	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG)
		3. ER-SR TTC has been declared assuming more than 1100 MW generation at Talcher Stage-2. In case Talcher Stage-2 generation goes below 1100 MW, then the ER-SR TTC would be revised downward as constraints within ER would emerge.

*Primary constraints

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Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	6/25/2015	Whole month	Revised considering skewed sharing of flows on WR-NR and ER-NR corridor in the range 70:30	Import of NR
2	6/28/2015	Whole month	STOA Margin revised due to Jhajjar reallocation	ER-SR/ NR-WR
3	7/20/2015	Whole month	STOA Margin revised considering CERC order dated 03-07-2015 in petition No- 92/MP/2015 which is under implementation by CTU. Pending this any margins would be released for short term transactions on day ahead basis.	ER-SR
4	8/24/2015	Whole month	Revised due to the commissioning of 765 kV Gwalior-Phagi 1,2	WR-NR/ Import of NR
5	8/26/2015	Whole month	Revised due to commissioning of 765kV Phagi-Bhiwani S/C and STOA margin revised due to operationalization of MTOA.	WR-NR/ Import of NR
			STOA Margin revised due to Operationalization of LTA.	W3 Zone Injection
6	8/26/2015	03/09/15 to 30/09/15	A remark has been put on Simultaneous Import of NR for approving STOA Bilateral Transactions	Import of NR

ASSUMPTIONS IN BASECASE					
				Month : September '15	
S.No.	Name of State/Area	Load		Generation	
		Peak Load (MW)	Off Peak Load (MW)	Peak (MW)	Off Peak (MW)
I	NORTHERN REGION				
1	Punjab	8327	7408	4656	4626
2	Haryana	7890	7084	3318	3318
3	Rajasthan	9096	8161	5709	5646
4	Delhi	4549	3953	1095	1095
5	Uttar Pradesh	12551	12022	6555	6605
6	Uttarakhand	1677	1295	874	723
7	Himachal Pradesh	1189	985	988	971
8	Jammu & Kashmir	2123	1439	438	438
9	Chandigarh	266	159	0	0
10	ISGS/IPPs	0	0	19172	14064
	Total NR	47668	42504	42804	37485
II	EASTERN REGION				
1	Bihar	2690	2033	110	0
2	Jharkhand	915	749	507	330
3	Damodar Valley Corporation	2906	2140	3619	2922
4	Orissa	3574	2894	3176	2150
5	West Bengal	7617	5926	5553	3524
6	Sikkim	88	43	0	0
7	Bhutan	105	104	1300	1030
8	ISGS/IPPs	608	568	9360	8909
	Total ER	18502	14458	23625	18865
III	WESTERN REGION				
1	Maharashtra	20211	11204	14900	6645
2	Gujarat	12909	7121	10115	4527
3	Madhya Pradesh	7861	4927	4832	2521
4	Chattisgarh	3612	2182	2491	1036
5	Daman and Diu	305	233	0	0
6	Dadra and Nagar Haveli	771	570	0	0
7	Goa-WR	513	293	0	0
8	ISGS/IPPs	1048	1046	23713	20410
	Total WR	47230	27575	56050	35139

IV	SOUTHERN REGION				
1	Andhra Pradesh	5904	5359	4699	4399
2	Telangana	7336	6348	3626	2262
3	Karnataka	7925	6076	7334	5247
4	Tamil Nadu	13399	11925	8681	7218
5	Kerala	3381	2230	1779	694
6	Pondy	338	290	0	0
7	Goa-SR	81	81	0	0
8	ISGS/IPPs	0	0	9605	9470
	Total SR	38364	32309	35724	29290
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	107	92	0	0
2	Assam	1050	944	285	250
3	Manipur	125	105	0	0
4	Meghalaya	312	208	211	155
5	Mizoram	72	44	4	4
6	Nagaland	110	106	22	16
7	Tripura	266	166	110	110
8	ISGS/IPPs	7	7	1501	1302
	Total NER	2049	1672	2133	1837
	Total All India	153812	118517	160336	122616